

COGNITIVE BEHAVIORAL TRAINING AND EDUCATION FOR SPACEFLIGHT OPERATIONS

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Cognitive behavioral-training (CBT) is an evidence-based practice commonly used to help treat insomnia, and is part of NASA's countermeasure regimen for Fatigue Management. CBT addresses the life style and habits of individuals that are maladaptive to managing stress and fatigue. This includes addressing learned behavioral responses that may cause stress and lead to an increased sense of fatigue. While the initial cause of onset of fatigue in the individual may be no longer present, the perception and engrained anticipation of fatigue persist and cause an exaggerated state of tension. CBT combined with relaxation training allows the individual to unlearn the maladaptive beliefs and behaviors and replace them with routines and techniques that allow cognitive restructuring and resultant relief from stress. CBT allows for elimination in individuals of unwanted ruminating thoughts and anticipatory anxiety by, for example, training the individuals to practice stressful situations in a relaxed state. As a result of CBT, relaxation can be accomplished in many ways, such as progressive muscle relaxation, meditation and guided imagery. CBT is not therapy, but rather the synthesis of behavioral countermeasures. CBT utilizes progressive relaxation as a means of reinforcing educational and cognitive countermeasures. These countermeasures include: masking, elimination of distracting thoughts, anxiety control, split attention, cognitive restructuring and other advanced psychological techniques.